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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,884	02/01/2005	Vladimir Ksinant	KSINANT1	6591

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EXAMINER	
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ART UNIT	PAPER NUMBER
2109	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/522,884	KSINANT ET AL.	
	Examiner	Art Unit	
	Sulaiman Nooristany	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-4 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-4 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 01/02/2005.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

1. This Office Action is response to the application (10522884) filed on 1, Feb 2005.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-4 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. However the claims will be given a broad reasonable interpretation for the purposes of examination.

Claim Rejections - 35 USC § 103

4. **The following is a quotation of 35 U.S.C. 103(a), which forms the basis for all obviousness rejections set forth in this Office action:**

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Westberg U.S Patent No. US 6,856,602** in view of **Alkhatib U.S Patent No. US 6,532,217.**

6. Regarding claim 1, Westberg teaches a method for automatic network dialing using an Internet or analogue type protocol this network comprising a plurality of interconnected routers initially bearing local link type addresses on each of their interfaces [(Fig. 3, Router (301)], said method making a master router [Fig. 3, Router (302)] and a dialer [Fig. 3, server, router (303)] intervene that can be inserted either into a server or into a network router [intranetwork e.g. DNS (Domain Name System) server (Col. 4, lines 55-56)] using a process of self-configuration of said protocol which allows equipment to automatically configure itself according to the information it receives from the router(s) connected to the same link [Fig. 1, Establishing a physical connection (101), Establishing a PPP link (102), Automatically Configuring (105)], by means of Router Advertisement type messages [hello message to inform the other routers within the intranetwork (Col. 5, lines 32-35)], wherein, ***in order to use the routing functions of of the network routers*** so as to be able to use the process of self-configuration [Fig. 1, Automatically Configuring (105)], of said protocol thanks to a mechanism making a dialer intervene which delivers said dialing prefixes according to an operating sequence comprising the following stages for each of the routers:

an initialisation stage in which the router has not as yet received a prefix issuing from the dialer and is therefore incapable of connecting to the dialer (The first step is to establish a physically connection between the new node and the existing router (Col. 4, lines 34-36), Fig. 1, Establishing a physical connection (101), Establishing a PPP link (102)], this stage terminating

when the router receives a Router Advertisement message, sent according to the self-configuration protocol by another router and Which comprises the list of prefixes it uses [One example is PPP (Point to Point Protocol) link but it is also possible to use another link protocol that supports IP. When PPP link has been established, the existing router becomes aware of the new node. To be able to make IP communication possible, the new node has to request an IP address by means of the IPCP (IP Control Protocol) via the existing router to the DHCP server (Col. 4, lines 38-45), Fig. 1, Requesting and receiving an IP address (103), Automatically Identifying (104)],

a configuration Advertisement stage actuated through the reception of the Router message during which, thanks to the information contained in the Router Advertisement message [Hello message (Col. 5, lines 32), Fig. 1, Automatically Identifying (104)], it self-configures a routing address on the interface through which the message came [Fig. 1, Automatically Identifying (104), Automatically Configuring (105)],

a relay stage in which the router has already received prefixes (IP addresses) and is capable of connecting to the dialer [the new node must be able to automatically identify the addresses to essential resources on the intranetwork e.g. DNS (Col. 4, lines 53-57)], the router thus intermediates [Fig. 6 (404)] between the dialer [Fig. 6 (406, 408)] and other routers which are still in the configuration stage [Fig. 1, Automatically Identifying (104), Starting Routing protocol (106), Fig. 6 (401)]

With respect to claim 1, Westberg shows all the features of the instant claimed invention except for the specific detail of "in order to use the routing functions of said protocol, the method consists in inserting a mechanism for allotting prefixes to the Ipv6 addresses of the network

routers" Alkhatib teaches that is well known to "use the routing functions of said protocol it consists in inserting a mechanism for allotting prefixes to the Ipv6 addresses of the network routers" (Ipv6 provides a procedure for a device to connect to a subnet and automatically acquire an IP address. The Ipv6 procedure for connecting to a subnet takes advantage of the behavior of Ipv6 routers, which advertise the subnet mask. A device forms an Ipv6 address by appending an already known unique interface token to a well known link local prefix (Col. 2, lines 14-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Westberg's invention by designing Ipv6 prefixes as taught by Alkhatib. The main feature of IPv6 that is driving adoption is the larger address space: addresses in IPv6 are 128 bits long. IPv6 hosts can be configured automatically when connected to a routed IPv6 network. When first connected to a network, a host sends a link local multicast (broadcast) request for its configuration parameters; if configured suitably, routers respond to such a request with a *router advertisement* packet that contains network-layer configuration parameters (as taught by Alkhatib).

7. Regarding claim 2, Westberg together with Alkhatib taught the method according to claim 1, as described above. Westberg further teaches wherein ***during the commissioning of the initialisation stage,*** , and

-if the configuration has already been performed, the router advances to the relay stage [Fig. 1, Automatically Identifying (104), Automatically Configuring (105)],

if the configuration has still not been performed:

• if the router is master [existing router, Fig. 3 (302)], then the routed immediately advances to

the configuration stage (block Bs) [This is possible if the DHCP service is extended to allow hosts that already have an IP address to retrieve configuration information (Col. 5, lines 15-18)],

• if the router is not master [Fig. 3, (router 201)], it remains alert on each of its interfaces (block B6) [The new node does not know the DHCP IP address, but the existing router, which first receives the request, knows the DHCP IP address, adds it to the request and sends it further to the DHCP server (Col. 4, lines 45-48)],

• when it receives a Router Advertisement message for one of its interfaces [The new router starts it self up by sending a so-called hello message to inform the other routers within the intranetwork about its existence as a newly added router to the intranetwork (Col. 5, lines 31-34)]:

• It records the address of the transmitting router as Upstream Router [The existing router also receives the answer of the lP address request, and forwards it to the new node (Col. 4, lines 45-48), The new node contacts DHCP and retrieves IP addresses to the essential resources (Col. 5, lines 18-19)]

• It self-configures a routing address on the interface and records it as primary address (block B7) [RA (Resource Allocation) server which are provided with the essential configuration information, e.g. IP address, address mask, configuration information for the interface (Col. 5, lines 56-59)],

• It advances to the configuration stage [The new node which from now on is called the new router contacts the DRC (Dynamic Router Configuration) server to get OSPF configuration information (Col. 5, lines 45-48)].

Alkhatib teaches "the router searches in its backed-up information if the configuration has

already been performed" [When an IP packet arrives, its destination address is looked up in the routing table. If the packet is for a distant network, it is forwarded to the next router using the network interface given in the table. If it is a local host (e.g., on the routers' LAN), it is sent directly to the destination. If the network is not present, the packet is forwarded to a default router with more extensive tables.(Col. 4, lines 44-50)] and it records the interface through which the message came as primary interface [The value field for an SOA record provides the name of the primary source of information about the name server zone, e-mail address of its administrator, a unique serial number and various flags and time outs in the value field (Col. 12, lines 8-12)].

8. Regarding claim 3, Westberg together with Alkhatib taught the method according to claim 2 as described above. Westberg further teaches wherein "characterised in that in the configuration stage, the router performs the following operations:

• if the router is master [existing router], it sends its query directly to the dialer (E), this configuration query containing the ordered list of primary addresses of the relays crossed, so that the dialer (E) can respond to this query [essential resources like e.g. DNS server, DHCP server, a so-called DRC server and a so-called RA server which are provided with the essential configuration information, e.g. IP address, address mask, configuration information for the interface and intranetwork configuration information (Col. 4, lines 52-59)],
• if the router is not master [Fig. 3, (router 201)], it sends its configuration query towards the upstream router via the primary interface, the query comprising the primary address [The DRC

server is a server that automatically provides the new node with configuration information e.g. OSPF configuration information (Col. 6, lines 1-3)],

upon receiving a reply from the dialer (E) [server]:

• it records the dialer address [server 306 which are provided with the essential configuration information (Col. 5, lines 56-57)].

• if the router is master [existing router]:

• it records the interface through which the reply came as primary interface [The existing router also receives the answer of the lP address request, and forwards it to the new node (Col. 4, lines 45-48), The new node contacts DHCP and retrieves IP addresses to the essential resources (Col. 5, lines 18-19) also **[See rejection to claim 2 above]**

• it self-configures a routing address on the interface and records it as primary address [When a new node is added to an existing router within the intranetwork, the new node will automatically be configured to act like a router (Col. 5, lines 60-64)],

• it self-configures a routing address for every interface to be configured and records them[When a new node is added to an existing router within the intranetwork, the new node will automatically be configured to act like a router (Col. 5, lines 60-64), **[See rejection to claim 2 above]**,

• it starts to periodically diffuse the router advertisement messages on each interface [Hello message],

• it advances to the relay stage [adjust relevant parameters and start it-self up as a router (Col. 5, lines 66-67)].

. Alkhatib teaches "it attempts to connect to the dialer (E) by querying as many prefixes from it as there are links to dial" [From the address configurations perspective, an interface token is a bit string of known length. The exact length of an interface token, and the way, it is created is defined by Ipv6. In many cases, the token will be the same as the interface's link layer address. The link local prefix is based on the subnet mask advertised by the router. Before the new address can be used by a device, there must be an attempt to verify that the tentative address is not already in use by another node (Col. 2, lines 21-28)].

9. Regarding claim 4, Westberg together with Alkhatib taught the method according to claim 1 as described above. Westberg further teaches wherein, "characterised in that in the relay stage, the router performs the following operations:
it receives the configuration queries issuing from other routers [where all routers and BTS in the Intranet are being auto configured except for one router which already is configured and thus being the existing router (Col. 6, lines 45-48)]:
• it inserts its primary address [IP addresses] in the query, these addresses being successively inserted in an orderly manner by each relay [The routers/BTSs closest to the existing router starts the auto configuration (Col. 5, lines 60-64)],
• it sends the new query either to its upstream router or directly to the dialer [When a new node 204, is added to an existing router 201 within the intranetwork 301, the new node 204 will automatically be configured to act like a router, by automatically contacting the essential resources to download configuration information, adjust relevant parameters and start it-self up as a router (Col. 5, lines 60-67)],

it receives the configuration replies either from other routers or from the dialer [Fig.1 Automatically Identifying (104)]:

• in the reply, the router searches for its own primary address [Fig.1 Automatically Identifying (104)],

• it selects the next address in the list [The routers/BTSs closest to the existing router starts the auto configuration, when they are configured they trig the auto configuration of the neighbor routers/BTSs (Col. 6, lines 47-51],

• it sends the reply to this address [when they are configured they trigs the auto configuration of their neighbor routers/BTSs, and so on until the complete BSS is auto configured (Col. 6, lines 51-54)]".

Alkhatib teaches that is well known to have "if the latter is accessible by the aforesaid protocol [IPv6 provides a procedure for a device to connect to a subnet and automatically acquire an IPaddress. The IPv6 procedure for connecting to a subnet takes advantage of the behavior of IPv6 routers, which advertise the subnet mask (Col. 2, lines 14-16)].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,434,144 to Romanov.

U.S. Patent 6532217 to Alkhatib et al.

U.S. Pat. Appl. Pub. 2002/0073215 to Huitema at al.

U.S. Patent 6,912,205 to Perlman.

U.S. Pat Appl. Pub. 2002/0126642, to Sitama.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sulaiman Nooristany whose telephone number is (571) 270-1929. The examiner can normally be reached on M-F from 9 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu, can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sulaiman Nooristany 6/8/2007

James K. Trujillo
Primary Examiner
TC 2100